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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,696	10/23/2003	Clifton W. Wood JR.	MI40-364	3582

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EXAMINER

NGUYEN, BRIAN D

ART UNIT PAPER NUMBER

2661

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,696

Applicant(s)

WOOD ET AL.

Examiner

Brian D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-20, 22, 23 and 27-38 is/are allowed.
- 6) ☒ Claim(s) 1, 6, 21, 24-26 and 39-75 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 21 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "the wireless identification device" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. "the wireless identification device" seems to refer back to "wireless communication devices" in lines 4-5 of claim 17. If this is true, it is suggested to change the dependency of claim 18 from claim 16 to claim 17.

Claim 46 recites the limitation "the first reply" in line 1. There is insufficient antecedent basis for this limitation in the claim. "the first reply" seems to refer back to "a first reply" in line 2 of claim 43. If this is true, it is suggested to change the dependency of claim 46 from claim 40 to claim 43.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 6, 24-26, 39-46, 49-54, 58-59, 61-64, 67, 69-72, and 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Snodgrass (5,583,850).

Regarding claims 1 and 24-25, Snodgrass discloses a method and system of establishing wireless communications between an interrogator (commander station 10 in figure 1) and individual ones of multiple wireless identification devices (responder stations 36 and 40 in figure 1), the wireless identification devices having respective identification numbers and being addressable by specifying identification numbers with any one of multiple possible degrees of precision, the method comprising utilizing a tree search in an arbitration scheme to determine a degree of precision necessary to establish one-on-one communications between the interrogator and individual ones of the multiple wireless identification devices, a search tree (figure 12) being defined for the tree search method, the tree having multiple selectable levels (tree in figure 12 has three selectable levels) respectively representing subgroups of the multiple wireless identification devices, the level at which a tree search starts being variable the method further comprising starting the tree search at any selectable level of the search tree (col. 13, lines 42-48 where Snodgrass teaches of the commander station begins a tree search by specifying a group of responder station addresses by selecting values for BRANCH and MASK. Figure 12 show different levels of the search tree. Note that when the commander station specifies BRANCH = 000 and MASK = 001, then the tree search will start at level 2, BRANCH 000).

Regarding claims 6 and 26, Snodgrass discloses integrated circuit includes a receiver, a modulator, and a microprocessor (see col. 8, lines 32-36 and col. 22, lines 38-49).

Regarding claims 39-41, Snodgrass discloses a method using a tree search (see figure 12) to determine an identification number of one of a plurality of wireless identification devices

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(responder stations), a search tree being defined for the tree search; and starting the tree search at a selectable level (level 1 or a level further down the search tree) of the search tree (see col. 13, lines 42-48 where Snodgrass teaches of the commander station begins a tree search by specifying a group of responder station addresses by selecting values for BRANCH and MASK. Figure 12 show different levels of the search tree. Note that when the commander station specifies BRANCH = 000 and MASK = 001, then the tree search will start at level 2, BRANCH 000).

Regarding claims 42-44, Snodgrass discloses skipping the level in response to detecting a collision in a reply (see col. 18, lines 11-26).

Regarding claims 45-46, Snodgrass discloses identification number and an arbitration number (see col. 4, lines 1-25).

Regarding claim 49, Snodgrass discloses a method comprises transmitting a first request for identification, in a accordance with a tree search to a first subgroup of RFID devices associated with a first branch at a first level of a search tree; and starting the tree search at a level other than levels 0 and 1 of the tree search (see col. 13, lines 42-48 where Snodgrass teaches of the commander station begins a tree search by specifying a group of responder station addresses by selecting values for BRANCH and MASK. Figure 12 show different levels of the search tree. Note that when the commander station specifies BRANCH = 000 and MASK = 001, then the tree search will start at level 2, BRANCH 000).

Regarding claims 50-52, Snodgrass discloses skipping the level in response to detecting a collision in a reply (see col. 18, lines 11-26).

Regarding claims 53-54, Snodgrass discloses identification number and an arbitration number (see col. 4, lines 1-25).

Regarding claims 58-59, 63-64, 67, 70-72, Snodgrass discloses a method and apparatus comprising: affixing a RFID device to an object for tracking and to identify the object, the RFID device to store an identification number, sending a first signal from an interrogator to the object, the first signal indicating a first subgroup at a first level of a search tree in accordance with a tree search; starting the tree search at a selectable level of the search tree; determining the identification number stored in the RFID device; and associating the identification number with the object (see abstract; figure 12; col. 13, lines 42-48 where Snodgrass teaches of the commander station begins a tree search by specifying a group of responder station addresses by selecting values for BRANCH and MASK. Figure 12 show different levels of the search tree. Note that when the commander station specifies BRANCH = 000 and MASK = 001, then the tree search will start at level 2, BRANCH 000).

Regarding claims 61-62, 69, 75, Snodgrass discloses skipping the level in response to detecting a collision in a reply (see col. 18, lines 11-26).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 47-48, 55-57, 65-66, and 73-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass in view of Gardner et al (6,038,455).

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Regarding claims 47-48, 55-57, 65-66, and 73-74, Snodgrass does not specifically disclose the use of Aloha scheme. However, the use of Aloha scheme is a matter of choice and well known in the art. Gardner discloses the use of Aloha scheme. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Aloha scheme as taught by Gardner in the system of Snodgrass in order to minimize packet collision.

7. Claims 60 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snodgrass.

Regarding claims 60 and 68, Snodgrass does not specifically disclose the selectable level is manually selected. However, to select a level manually is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to select a level manually in order to give the operator more control over the selecting of level.

Allowable Subject Matter

8. Claims 7-20, 22-23, and 27-38 are allowed.

9. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed 12/13/05 have been fully considered but they are not persuasive.

The applicant argued that "Contrary to the Examiner's assertion, the Snodgrass et al. reference fails to teach or suggest starting a tree search at a selectable level of the search tree, in combination with the other elements of the claims. Instead, the Snodgrass et al. reference teaches always starting a tree search at the top node. See, for example, Fig. 1 2, and text starting at Col. 1 6, line 22; and, more particularly, text starting at Col. 17, line 53 of the Snodgrass et al. reference.". The examiner disagrees because nowhere in the Snodgrass reference teaches **always** starting a tree search at the top node. As in the claimed invention, the top node (first level) in Snodgrass is one of multiple selectable levels. In col. 13, lines 46-48, Snodgrass teaches "in one embodiment, the initial group specification, i.e, BRANCH and MASK values, would specify all possible responder station" and in col. 17, lines 61-63, Snodgrass teaches "commander station 10 chooses BRANCH=000 and MASK-000, calling for all responder stations to respond.". In this embodiment, the selected level is level one. However, in col. 13, lines 43-44, Snodgrass clearly teaches of starting a tree search at a selectable level of the search tree by stating: "commander station 10 specifies a group of responder station addresses by **choosing** values for BRANCH and MASK.". BRANCH and MASK values are shown in figure 12. Suppose the chosen values for

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BRANCH and MASK are 001 and 001, respectively, then the tree search will be started at level two, BRANCH 001. Therefore, all levels in the search tree in figure 12 are selectable levels. The applicant also argued that “By knowing the maximum number of devices that are in the field (that can communicate with the interrogator), and starting an arbitration search scheme at a point in response to that number, the number of collisions are reduced, thus resulting in reduced arbitration time, as discussed in applicant's specification. This issue is not addressed by the Snodgrass et al. reference and no solution is taught.”. This argument is not persuasive because the rejected claims do not include these limitations. Claim 2 contains “determining the maximum possible number... and selecting a level of the search tree based on the determined maximum possible number...” is already allowed. Regarding 103 rejection, the applicant argued that “It would not be obvious to substitute a portion of the structure of Gardner et al. for portions of the structure of Snodgrass because there is no teaching in the references themselves of how the components should be combined or of which components of Gardner et al. should be combined with which components of Snodgrass. There are no teachings in the references themselves which teach that there would be any advantage resulting from selecting portions of the structure of Gardner et al. and integrating that structure somehow into the structure of Snodgrass. The mere fact that the structures of the references could possibly be somehow modified to result in the claimed structure does not render the claimed structure obvious unless the references themselves suggest the desirability of the modification.”. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so

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found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the applicant claims the use of Aloha scheme. The Aloha scheme is a well-known probabilistic anti-collision scheme that use a multi-access contention protocol, first developed for use in Hawaii. Gardner uses the Aloha scheme to avoid packet collision and the admitted prior art in col. 2, lines 34-40 of the specification also use the Aloha scheme. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Aloha scheme to minimize packet collision.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

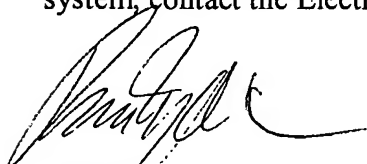
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



1/20/06

BRIAN NGUYEN
PRIMARY EXAMINER